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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/018,501	03/01/2002	Frank Johannes Alfred Dirk Bakkeren	ACO 2701 PIUS	7915

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EXAMINER

BERMAN, SUSAN W

ART UNIT

PAPER NUMBER

1711

DATE MAILED: 04/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/018,501	Applicant(s) BAKKEREN ET AL.	
	Examiner Susan W. Berman	Art Unit 1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 11-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 11-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

A

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 03/14/2005 has been entered.

Response to Arguments

Applicant's arguments with respect to claims 1, 4 and 6 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections under 35 USC § 102 or 103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claim 16 is rejected under 35 U.S.C. 102(b) as anticipated by Moyer et al (4,078,118). Moyer et al disclose pentaerythritol esters of mercapto acids plus long chain fatty acids. The esters are obtained by reacting a polyol with a mixture of a monocarboxylic acid containing a thiol group and long chain fatty acid (column 1, line 51, to column 2, line 7). A small group of operable saturated and unsaturated fatty acids, including oleic and linoleic acids, are taught in column 2, lines 3-6. The disclosed esters containing thiol groups meet the requirement for both a thiol compound (a) and an oxidatively drying polyunsaturated condensation product (b) when the fatty acid includes unsaturated fatty acid. Applicant discloses in the instant specification that oxidatively drying polyunsaturated condensation products are obtained from unsaturated fatty acids (bridging pages 2-3). Compositions comprising the pentaerythritol esters of mercapto acids obtained from unsaturated long chain fatty acid compound (Applicant's thiol compound and oxidatively drying condensation product in claim 1), a photoinitiator, a polyene and a polythiol compound are taught (see Formulation A in Example 4). The polyene is encompassed by the comprising language in the instant claims. Those compositions disclosed by Moyer et al wherein the fatty acid employed includes linoleic acid, for example, meet the requirements of the instant claim for an "oxidatively drying" alkyd.

Claims 1-5, 7, 8, 11-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Van Den Berg et al (6,548,565). Van Den Berg et al disclose compositions comprising an oxidatively drying alkyd resin, a photoinitiator and a vinyl ether, acetal or alkoxysilane compound. The vinyl ether, acetal or alkoxysilane compound also contains a reactive group such as a thiol group (column 4, lines 58-67, column 6, lines 20-21). The photoinitiator is suitably an acylphosphine oxide or a thioxanthone (column 6, lines 64-67). See claim 1 and Example II. The ratio of number of oxidatively drying groups to number of groups reactive to acid is in the range from 1/10 to 15/1 (column 6, lines 44-54).

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Claims 1-5, 7, 8, 11-17 are rejected under 35 U.S.C. 103(a) as obvious over GB 2 166 749 in view of Van Den Berg et al. GB 2 166 749 discloses coating compositions comprising a polythiol and a condensation polymer having autoxidisable groups derived from drying oil or semi-drying oil fatty acids that provide for additional cure by oxygen in air (page 2, lines 22-28). GB '749 does not mention photoinitiators. See the discussion of Van Den Berg et al set forth above. Van Den Berg et al teach that the ethylenically unsaturated alkyd resin is cured by oxidatively drying under the influence of a photoinitiator, while the alkoxysilanes, etc., are cured under influence of an acid and moisture in air.

It would have been obvious to one skilled in the art at the time of the invention to add a photoinitiator, such as an acylphosphine oxide photoinitiator, as catalyst to the polyene-thiol compositions disclosed by GB '749, as taught by Van Den Berg et al. The references teach analogous compositions. GB '749 teaches that it is desirable to use a catalyst in composition comprising a thiol component (page 3, lines 59-61). Van Den berg et al teaches oxidative curing of analogous oxidatively curing alkyd resins under the influence of a photoinitiator.

Claim 6 is rejected under 35 U.S.C. 103(a) as obvious over Van Den berg et al alone or over GB 2 166 749 in view of Van Den Berg et al, as applied to claim 1 above, and further in view of Doomen et al (5,859,135). See the rejection over GB '749 and Van Den Berg et al set forth above. Doomen et al teach aqueous coating compositions comprising an alkyd resin and a photoinitiator. See column 2, line 11, to column 3, line 35, column 4, line 58, to column 5, line 25, column 6, line 63, to column 7, line 46, column 13, lines 41-45. Crosslinking compounds include compounds containing active hydrogen. Doomen et al do not mention thiol compounds.

It would have been obvious to one skilled in the art at the time of the invention to employ the alkyd resin disclosed by Doomen et al in the compositions taught by Van Den Berg et al alone or by GB '749 in combination with Van Den Berg et al in order to provide an aqueous coating composition, as

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taught by Doomen et al. One of ordinary skill in the art at the time of the invention would have been motivated by a reasonable expectation of providing a useful coating composition.

Claim 9 rejected under 35 U.S.C. 103(a) as obvious over GB 2 166 749 in view of Van Den Berg et al, as applied to claim 1 above, and further in view of Moyer et al (4,078,118). GB discloses a specific thiol compound, such as pentaerythritol tetrakis(mercaptopropionate) at page 3, lines 40-52. Moyer et al disclose analogous thiol compounds based on pentaerythritol comprising a fatty acid component. Moyer et al teach that the disclosed pentaerythritol esters comprising a fatty acid component provides improvement in slip properties (column 14, lines 35-42). It would have been obvious to one skilled in the art at the time of the invention to employ a thiol-functional pentaerythritol ester of long chain fatty acid taught by Moyer et al, as the thiol compound in the compositions disclosed by GB '749. One of ordinary skill in the art at the time of the invention would have been motivated by a reasonable expectation of successfully improving slip properties in the coating compositions disclosed by GB '749, as taught by Moyer et al.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-9 and 11-17 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-13 of U.S. Patent No. 6,476,183 in view of Van Den Berg et al or Doomen et al. Although the conflicting claims are not identical, they are not patentably distinct from each other for the following reasons. US '183 claims a coating compositions comprising an oxidatively drying condensation product having more than 20% pendent groups comprising unsaturated carbon-carbon bonds, a polythiol and a siccative. The condensation product set forth is encompassed by the instantly claimed condensation products. The difference from the instantly claimed compositions is the instantly recited photoinitiator. Each of Van Den Berg et al and Doomen et al teach photopolymerizing oxidatively drying condensation products containing ethylenically unsaturated group in the presence of a photoinitiator. It would have been obvious to one skilled in the art at the time of the invention to add a photoinitiator to the composition set forth in the claims of US '183 and to photopolymerize the compositions, as taught by Van Den Berg et al or Doomen et al in analogous art. One of ordinary skill in the art at the time of the invention would have been motivated by a reasonable expectation of achieving a complete cure by exposure to radiation and by oxidative drying.

Conclusion

Chang et al (4,025,407). Chang et al teach compositions comprising a thermosetting resin and a radiations sensitive material that is cured by exposure to actinic radiation and then to conventional curing mechanism for the thermosetting resin. The conventional thermosetting resin can be alkyd resin (column 4, lines 11-40). Radiation sensitive unsaturated polyesters are taught (column 1, line 63, to column 3, line 38, and). Boeckeler et al (4,377,457) disclose dual cure coating compositions using either oxidative crosslinking of backbone drying oil unsaturation followed by UV cure or by UV activated reaction of pendent allylic groups with polymercaptans followed by melamine heat cure. Ostlie (5,876,805) discloses visible light polymerizable thiol-ene compositions comprising at least one acyl phosphine oxide

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photoinitiator. See column 3, line 66, to column 4, line 67, and column 6, lines 13-38. Schneider et al (5,688,859) disclose aqueous binders obtained by reacting a hydroxy-functional fatty acid-modified polyester with a diisocyanate and a hydroxy-functional acrylate. Polyisocyanate and/or amino crosslinkers are disclosed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan W. Berman whose telephone number is 571 272 1067. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571 272 1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Susan W Berman
Primary Examiner
Art Unit 1711

SB
4/14/05